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ABSTRACT

This progress report on the Family Development Research Program for 108 low-income families, conducted at Syracuse University Children's Center, provides information on a longitudinal comparison instituted when the program children reached 36 months of age. The families of the children were matched to control families on a number of variables. Analysis of the study data provided the following findings: (1) center children scored significantly higher on the Stanford-Binet Intelligence test than did controls from a low-education group, but not as high as controls from a high-education group; there were few differences among the three groups on the Illinois Test of Psycholinguistic Abilities; (2) on the Schaefer Classroom Behavior Inventory, the center children had greater than median responses on all the items reflecting social and emotional developmental maturity, and had responses below the median on social and emotional items reflecting developmental immaturity; on the Beller Scale, results showed that the center children had developed very superior attention and persistence habits, satisfaction and interest in work, and the ability to carry out tasks autonomously and with initiative; the Schaefer Classroom Checklist was found a powerful predictor of 36-month IQ; (3) on the Self-Esteem and Emmerich's Observer Ratings of Children, the center children rated high on the self-esteem rating scale, and the group mean on the entire scale was relatively high; results from the Emmerich showed that the program children appeared to be more involved, expressive, relaxed, active, energetic, stable, social, assertive, independent, constructive, purposeful, affectionate, socially secure, flexible, and happy than controls; and (4) nutrition in center and control families was good. (DB)

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THE FAMILY DEVELOPMENT RESEARCH PROGRAM

A Program for Prenatal, Infant and Early Childhood Enrichment

Progress Report

College for Human Development

Syracuse University

Syracuse, New York 13210

PS 006501

J. Ronald Lally, Principal Investigator

February 25, 1973

Summary of the Family Development Intervention Program

The Syracuse University Children's Center, directed by Dr. J. Ronald Lally, has an innovative Family Development Research Program, offering complete child care services. Quality comprehensive services are offered to low-income families.

The program at the Children's Center is different from most child-centered programs. Dealing directly with 108 low-income, multi-problemed families, it encourages the individuality of each family with its inherent cultural background. The Center's staff provides relief from pressures without assuming the entire burden of family responsibilities, or trying to be substitute parents. Emphasis on family involvement stems from the awareness that when most child-centered intervention programs cease, the children from multi-problemed families are soon found to be indistinguishable in intellectual functioning from their peers.

The Center's comprehensive service to families extends to include service to unborn infants. Professionals make weekly home visits to expectant parents, starting three-to-six months before the child is born. These visits are continued as long as the child is in the program. The home visitors help the mothers to understand their own nutritional needs and the needs of infants. The home visitors also demonstrate to the parents ways to nurture child development after birth. Problems--financial, emotional, social, nutritional, etc.--are dealt with as they appear. The severity and complexity of these problems reinforce the Center staff's deep conviction of the need for extended family-oriented day care.

A parent organization meets once a month and parents are often in attendance at the Center. Friday morning parent workshops are very popular, and a "memo to mommy" note system aids in keeping communication lines open between teachers and parents. In the Friday workshops, parents join in classes on topics such as, braided rug-making, tie-dyeing, and slat furniture-making. Mothers are also at the Center during the week making clothes for themselves and their infants, creating play materials for children, and making seasonal decorations for their homes. Parents and staff members meet often to discuss Center policy, problems which may arise, or other topics of interest.

A major component of the Children's Center is an "infant fold" for children ranging from 6 months to 15 months of age. The infants attend a Center-based program on a half-day basis. Four infants are assigned to one caregiver for special loving care, cognitive and social games, and language stimulation. Materials and environment are used to promote sensory and motor skills. Teachers follow a curriculum based on the developmental theories of Jean Piaget and Erik Erikson. Play materials and games are used to help children develop means-ends relationships, object permanence, causality, and spatial concepts in a climate of basic trust. The level of a task is matched to the developmental level of each child. The program's emphasis is on using routine caregiving activities, such as diapering, feeding, and napping, to promote a positive self-concept, joyful emotional encounters, and language experiences. Development is assessed regularly. Comparisons of development are made with groups of infants selected from outside the Center who have not been involved in intervention programs.

Toddlers (15 months to 48 months of age), attend a full-day, multi-age group experience called the Family Style Program. This program is modeled after the British Infant Schools. The men and women caregivers in family-style groups provide special activities in different areas in their rooms. These areas are equipped for different activities such as small-muscle games, listening and looking experiences, large-muscle games, and expressive play. The children can move freely from one area to another and choose their activities as well as the time they wish to spend on any one activity.

In-service training is held weekly for all teachers and for home visitors. Close staff relations are furthered by frequent meetings to exchange ideas, to create new materials, and to obtain and discuss developmental test information which can help a teacher to more efficiently deal with her children.

Preface

It is important to preface this document by stating clearly that the major goal of the "Family Development Research Program" is a longitudinal one. This means that the main effects of the intervention cannot be truly judged until at least one, two or three years after intervention ceases. It also means that short-range comparisons (comparisons while intervention is progressing), no matter how interesting, will not be used as indicies of success but only as signs that the intervention might possibly be taking hold. The major goal then is the support of child and familial behaviors that sustain growth after intervention ceases.

A longitudinal comparison study was instituted when program children reached their 36th month of life. At that time the families of program children were matched to control families on a number of variables. These matched pairs will be compared when the target child is 36, 48, 60, and 72 months of age on various measures.

Because randomization of subjects to treatment and contrast groups was impossible at the beginning of this study, careful matching procedures were instituted to help alleviate some of the design problems, especially those dealing with internal validity. Additionally, recruitment methods used for obtaining control families are identical to those used in obtaining the families for the treatment group. For additional information on matching procedures, see Narrative Description (1973).

This third year of the Family Development Research Program's longitudinal study, investigating the effects of providing comprehensive services to low-income families, finds many of the program children reaching their thirty-sixth month of life. The data collected on the matches mentioned above will be used to study the effects of the program on children up to and then into the first few years of primary school.

To better understand the data presented in this report, it is necessary that the reader have a good knowledge of the testing techniques employed. The standardized testing techniques were similar to those described by Golden & Birns (1968). Personal communication with Francis Palmer reinforced our notion that every effort should be made by our testers to obtain valid estimates of each child's intellectual achievement. Tests were not given until the testers felt that the child to be tested was comfortable with them and the testing room. A good deal of time was spent "getting acquainted" with the children, and if it was felt that a child was not psychologically ready to be tested, free play continued and the test was rescheduled. Many children came to the center three times before testing was completed. Once in the testing situation, the child was graded on actual attempts at the task, and not graded when an item was presented but the child was not attending. Test administration was flexible, but care was taken not to use methods which would invalidate test items. The scoring of test responses was highly standardized.

These preliminary remarks should help the reader to better interpret the cognitive data on low-education center and control children. These children come from extremely low-income homes as has been reported elsewhere (Progress Report 1971). We feel that we have given a much more accurate assessment of their intellectual skills than if we had used more traditional methods of assessment.

This report will supply six different types of information to the Office of Child Development:

1. The first longitudinal cognitive data comparing center and control children.
2. The effect of noncognitive mediators of behavior on the cognitive development of program children.
3. A description of the personal-social behavior of program children.
4. A description of the nutrition and health intervention programs.
5. A profile of the teacher's classroom functioning.
6. An assessment of children by their parents and the perceptions of parents as to how the program and program staff have affected them and their children.

Section 1- The First Longitudinal Cognitive Data Comparing Center and Control Children

The major component of our research has just begun. It is a longitudinal comparison of the development of program children, with a control group and a high-education contrast group selected when program children reached 36 months.

Forty-two Center children were compared with thirty-one low-education controls and seventeen high-education contrast children. Stanford-Binet mean scores are presented in Table 1.

Table 1

Binet Scores for Center Children, Low-Education Controls, and High Education Contrast Children at 36 Months of Age

	Children's Center Children N=42		Low-Education Controls N=31		High-Education Contrast N=17	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
Binet Score	111.2*	14.4	98.4	15.7	125.0**	12.9

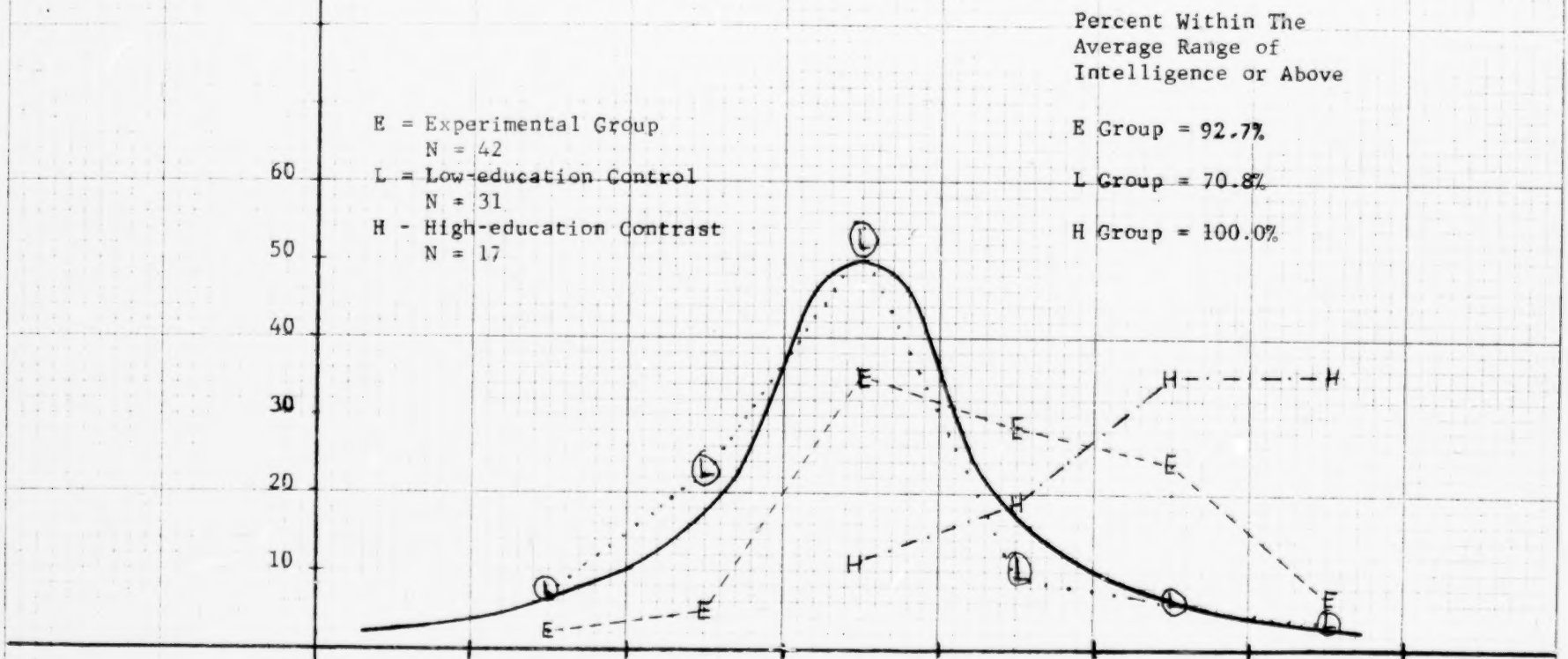
* Scored significantly higher than Low-Education Controls $p < .001$
** Scored significantly higher than Children's Center Children $p < .005$

Figure 1 contains a plotting of sub-groups of the large groups mentioned above as compared with normal distribution of IQ scores on the Stanford-Binet Intelligence test.

Note that the mean and median scores for the low-education controls fall in the 90-109 range. These scores are higher than any low-education control group data thus far reported in this country, and might be explained by the relaxed and sensitive testing techniques mentioned in the introduction. The mean and median scores of the Children's Center children fall in the 110 to 119 range and represent a significant difference in score from the mean of the low-education group. This finding is especially important in light of Jensen's (1969) threshold hypothesis that early intervention will do little to change IQ scores of children who are not functioning at an extremely low cognitive level. A thirteen point mean difference was found between low-education controls and Children's Center children. These differences were not between control children scoring at 80 IQ or below and experimentals in the normal range, but between children scoring at a 36-month mean of 98.4 and 111.2.

Figure 1

A 36-Month Stanford-Binet IQ Distribution Comparison Between the Experimental Children and their Controls & Contrasts



IQ Distribution Range	≤ 69	70-79	80-89	90-109 Average-Range	110-119	120-129	≥ 130
% Within Normal Dist. **	2.2%	6.7%	16.1%	50.0	16.1%	6.7%	2.2%
Experimental Group % Within Dist.	0.0%	2.3%	4.7%	35.7%	28.5% *	21.4%	7.1%
Low-education Controls-% Within Dist.	0.0%	6.4%	22.5%	51.6% *	9.6%	6.4%	3.2%
High-education Contrasts-% Within Dist.	0.0%	0.0%	0.0%	11.7%	17.6%	35.2% *	35.2%

* Range in which the median and mean scores for the different treatment groups is found.
** Note: 1960 Normative Distribution of the Stanford-Binet.

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The sub-group break-downs shed even more light on this rejection of the threshold hypothesis. Low-education controls very closely approximate the normal distribution of the Stanford-Binet, while only seven percent of the experimental group fall below the average range of intelligence, and 57% score at 110 IQ or better. Experimental children clearly function at a higher level than one would expect to find when compared with the normal distribution of the Stanford-Binet.

This data is especially interesting base line data for one expects that the scores of controls will move down toward 80 IQ (A.I.R., 1968) as the children get older. The next few years of longitudinal comparisons will chart this movement if it comes.

The high-education contrast group have a mean and median score in the 120-129 range and score significantly higher than control and experimental children. Note that none of the high-education contrast children score lower than 90 IQ.

An analysis of the Illinois Test of Psycholinguistic Abilities showed few differences among the three groups. Although there were differences in scores on the seven subtests used, with the high-education groups scoring somewhat higher than the other groups, and the experimental children scoring slightly higher than their controls. The vast range in scores within the groups made only a few of these differences significant. It seems as if the child's ability to take the ITPA was being tested at 36 months rather than his psycholinguistic ability. Many children in all three groups got almost no score on the subtests. I do feel, however, that ITPA scores will be extremely useful for next year's 48-month comparison study. I do plan to continue to use the seven subtests: auditory reception, visual reception, auditory association, verbal expression, manual expression, grammatic closure, and visual closure. However, I would strongly urge the Office of Child Development to recommend that the ITPA not be used for comparing groups of 36-month-olds.

Language is present in the natural classroom setting. Table 2 contains the data collected on 34- to 36-month-old children during 15 two-minute observation periods on the CLOC (Classroom Observation Checklist) developed by Nancy Smothergill, one of our research staff members.

TABLE 2

Mean Number of Various Types of Verbal Utterances of 34 to 36-Month-Old Program Children as Measured by the CLOC During 30 Minutes of Classroom Observation

Item	X Number of Responses	Item	X Number of Responses
Greeting	1.77	Directions	6.54
Attention Skg.	.62	Explanations (reason)	.69
Focusing	8.54	Label (name)	4.93
Confirm	6.54	Description (relate)	9.69
Disconfirm, disapr.	8.08	Intent	2.15
Neg. Attention Skg.	1.08	Imitate Directly	1.39
Possession	2.38	Song	.62
Express Need	9.69	Role playing lang.	7.39
Asks Information	5.64	Word Play	.54
		Garbled	8.00

It can be seen that many types of language skills are present at 36 months. This reinforces the belief that ITPA might prove more useful at 48 months.

Section 2 - The Effect on Noncognitive Mediators of Behavior on the Cognitive Development of Program Children.

In a recent research plan (Lally, 1972), submitted to the Office of Child Development, many of the noncognitive goals of the program were elaborated upon. Movement toward many of these goals was assessed by the use of the three measures: (1) the Schaefer Classroom Behavior Inventory (Schaefer, 1972), (2) the Beller Autonomous Achievement Striving Scales (Beller, 1969) and the (3) the Schaefer Behavior Check List, Schaefer (1970).

Table 3 contains the mean, median and modal responses of program children on the Schaefer Classroom Behavior Inventory.

Table 3

Mean, Median and Modal Responses of 36-Month-Old Program Children on the Schaefer Classroom Behavior Inventory* (N=32)

		Mean	Median	Mode
1 a.	Pays attention to what he's doing when other things are going on around him.	4.38	4.64	5.00
2 a.	Tries to be with another person or group of people (overall rating).	4.19	4.18	4.00
b.	Tries to be with another child or children.	4.25	4.40	5.00
c.	Tries to be with another adult or adults.	3.31	3.33	4.00
3.	Gets impatient or unpleasant if he can't get what he wants when he wants it.	2.13	1.72	1.00
4.	Stays with a job until he finishes it.	4.31	4.57	5.00
5 a.	Likes to take part in activities with others. (overall rating).	4.47	4.64	5.00
b.	Likes to take part in activities with children.	4.34	4.57	5.00
c.	Likes to take part in activities with adults.	4.43	4.75	5.00
6.	Slow to forgive when offended.	1.78	1.05	1.00
7.	Becomes very absorbed in what he is doing.	4.19	4.69	5.00
8 a.	Enjoys being with others (overall rating)	4.59	4.85	5.00
b.	Enjoys being with children.	4.66	4.94	5.00
c.	Enjoys being with adults.	4.50	4.75	5.00
9.	Stays angry for a long time after a quarrel.	1.41	1.32	1.00
10.	Works earnestly at his classwork. Doesn't take it lightly.	4.25	4.64	5.00

Table 3 (continued)

Mean, Median and Modal Responses of 36-Month-Old Program Children on the Schaefer Classroom Behavior Inventory* (N=32)

		Mean	Median	Mode
11a.	Seeks social contact with others (overall).	4.16	4.38	4.00
b.	Seeks social contact with others (rate only for verbal attempts).	4.63	4.96	5.00
c.	Seeks social contact with children.	4.50	4.69	5.00
d.	Seeks social contact with adults.	3.69	3.70	4.00
12.	Complains or whines if he can't get his own way.	1.91	1.70	1.00
13a.	Watches carefully when a person is showing how to do something (overall rating).	4.53	4.83	5.00
b.	Watches carefully when a child is showing how to do something.	4.03	4.61	5.00
c.	Watches carefully when a teacher or other adult is showing how to do something.	4.56	4.85	5.00
14a.	Does not wait for others to approach him, but makes the first friendly move.	3.63	3.88	4.00
b.	Does not wait for children to approach him but makes the first friendly move.	3.72	3.93	4.00
c.	Does not wait for adults to approach him but makes the first friendly move.	3.41	3.50	4.00
15.	Angry when he has to wait his turn or share with other children.	1.91	1.54	1.00

Scoring code for the Inventory:

1. Almost Never
2. Occasionally
3. Half the time
4. Frequently
5. Almost Always
6. Always

* With modifications by S.U. Children's Center, Sept. 1972.

Program children had markedly greater than median responses on all the items reflecting social and emotional developmental maturity. They also fell far below median responses on social and emotional items reflecting developmental immaturity.

The modal responses on the five social and emotional negative items on the scale were all 1.00. That means that most of the children almost never acted in social-emotional negative ways such as being slow to forgive when offended. These ratings represent extremely positive functioning on the part of program children.

The Beller Scales of Autonomous Achievement Striving tap somewhat similar non-cognitive styles of classroom behavior. Mean data on 36 month old program children are presented in Table 4.

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Table 4

Mean, Median, and Modal Scores of 36-Month-Old Program Children on Beller's Autonomous Achievement Striving Scale (N=32)

	Mean	Median	Mode
*1. How often does the child derive satisfaction from his work?	5.43	5.73	6.00
**2. How often does the child attempt to carry out routine tasks by himself?	6.13	7.00	7.00
3. How often does the child attempt to overcome obstacles in the environment by himself?	5.47	5.75	7.00
4. How often does the child take initiative in carrying out his own activities?	5.94	6.25	7.00
5. How often does the child try to complete an activity?	5.69	5.94	7.00

* Ratings for #1 = 1 3 5 7

very rarely and very little satisfaction — sometimes and little satisfaction — often and satisfaction — very often and very much satisfaction

** Ratings for #2, 3, 4, & 5

1 3 5 7

very rarely and without persistence — occasionally and little persistence — often and persistently — very often and very persistently

Since the positive end of the Beller scale is the high end (highest score=7) in can be seen particularly when one regards the modal response, that our 36 month olds have developed very superior attention and persistence habits, satisfaction and interests in work and ability to carry out tasks autonomously and with initiative.

The Schaefer Classroom Checklist compiles teacher ratings of cognitive mediators of achievement as well as ratings directly relating to cognitive interests in the classroom. A Spearman R was run correlating checklist items with Binet IQ at 36 months. The Schaefer Classroom Checklist was found to be a powerful predictor of 36 month IQ. Table 5 contains the correlation table for the program children.

Table 5

Spearman R Correlating Schaefer Classroom Check List Items with Stanford Binet IQ Scores for 36 Month Old Program Children (N=32)

	Spearman R	Significance Level
Possessive of teacher	0.25	n.s.
Easy to get along with	0.26	n.s.
Accepts criticism or discipline without restraint	0.28	n.s.
Grasps concepts readily	0.66	$p < .01$
Extends learning to new situation	0.60	$p < .01$
Disrupts others	0.04	n.s.
Enters into role play	-0.65	$p < .01$
Carries through a series of events	0.63	$p < .01$
Obeys	0.43	$p < .01$
Motivated to academic performance	0.65	$p < .01$
Initiates friendship with others	0.32	$p < .05$
Has sense of humor	0.39	$p < .05$
Talks at free time	0.47	$p < .01$
Participates in group discussion	0.59	$p < .01$
Seeks constant reassurance	0.27	n.s.

It seems clear to me after looking at these data that there is a direct link between motivation toward, and interest in cognitive achievement and IQ scores. There also seems to be a similar link between personal-social positive behavior and IQ. Three of the four items that show no significant correlation with IQ are: "seeks constant reassurance", "disrupts others", and "possessive of teacher". One would not expect these items to be correlated with IQ. The fourth item, "easy to get along with", can certainly be seen as a neutral item. The negative correlation found between IQ and the item, "enter into role play", is puzzling. Baldwin (1968) has discussed the cognitive richness of fantasy play and this finding seems to fly in the face of logic. It will be interesting to see the continued correlations of this item with IQ as the children grow older. One member of the research staff has asked this question about the negative correlation.

Is it possible that more gross dramatic play manifestations such as "monster man" are easily noticed by teachers, but that more subtle or quieter dramatic role-play techniques associated with high IQ escape teacher notice? This question of course, does not explain away the data, but deserves attention in the coming year.

Section 3 - A Description of the Personal-Social Behavior of Program Children

As one of the goals for the Experimental children at 36 months as set forth by the teachers (see Research Report, August 1972), a positive self-concept or sense of well-being was felt to be important. In other words, the teachers of the day care program proposed as a goal that the Children's Center child should have a positive self-concept. In attempting to measure self-concept in three-year-olds we turned to the work of Coopersmith (1967). Coopersmith used both self-report from subjects as well as behavioral ratings done by teachers on behaviors felt to be correlated with high or low self-esteem. In his work Coopersmith found few instances where there was a marked discrepancy between self-report scores and teacher behavioral rating scores. That is, in only a few cases did the child report he felt good about himself (high self-esteem) and the teachers rated his behavior as indicating low self-esteem, or vice versa.

Coopersmith's work has been done with elementary school children where the self-report technique relied upon the use of a paper and pencil test. E. T. Clark (U-Scale, 1965) has developed a self-report self-concept scale for use with younger children, using a choice between pictures of the subject child in a high self-concept or low self-concept position. Although this technique has possibilities for our research, the particular pictures placed much emphasis on the whole family unit and on middle-class home life. For this reason we felt the U-scale would be weighted against our population.

We therefore chose to administer the Behavioral Rating Form as developed by Coopersmith (1967), with minor adjustments in wording made to fit the younger age range. All the teachers who came into daily contact with the subject in the family style classrooms were asked to rate the behavior of the subject at the time of his 36-month birthday.

The scores of the 36-month-old children indicated a mean Self-Esteem score of 49.3 out of a possible 65 points with a range of 34.8 to 59.2 points. The mean standard deviation was 4.89 points. An analysis of the mean scores for individual items on the self-esteem rating scale showed that the group of 36-month-olds rated high (above midpoint) on all thirteen items and that the group mean for the entire scale was relatively high (72% of possible score).

Another instrument which was used for observing the personal-social behaviors of 36-month-old children was Emmerich's (1971) Observer Ratings of Children. Intensive observation of classroom behavior of 13 program children and a separate group of 15 low-income controls attending city preschools was completed. Six half-hours of observation were completed on each child. Significant differences at the .05 level or better were found on a number of items. Program children scored higher than controls on:

1. Exhibits interest in or concern for others in distress
2. Friendly toward adult
3. Friendly toward child
4. Gets intrinsic satisfaction from activity or task
5. Attempts to communicate verbally to adult
6. " " " " " child

7. Unusually good physical coordination
8. Recovers quickly from frustration or threat

Program children scored significantly lower on:

1. Restlessness
2. Hesitant in relating to child
3. Preoccupied with own thoughts
4. Does not concentrate on activity

The only item which significantly favors control behavior is:"easily frustrated or threatened by other children." The observers felt that this finding could have been caused by the larger number of child-to-child interactions they observed in program children as compared with control children.

Scores on the extreme ends of Emmerich's 7-point Bipolar Scale also show some interesting differences between the groups. The percentage of children receiving the two lowest or two highest scores on the bipolar items are indicated in Table 6.

TABLE 6

Percentage of Center and Control Children on the Extreme Ends of Emmerich's Personal-Social Bipolar Scale

Withdrawn	vs	Involved
4.6% Center		40.0% Center
25.3% Control		16.1% Control
Masculine	vs	Feminine
10.8% Center		3.1% Center
4.6% Control		1.1% Control
Tolerates Frustration	vs	Vulnerable to Frustration
20.0% Center		6.1% Center
8.0% Control		8.0% Control
Compliant	vs	Rebellious
9.2% Center		0.0% Center
44.8% Control		4.6% Control
Expressive	vs	Restrained
40.0% Center		4.6% Center
8.0% Control		33.3% Control
Tense	vs	Relaxed
4.6% Center		58.5% Center
6.9% Control		31.0% Control

TABLE 6 (cont.)

Percentage of Center and Control Children on the Extreme Ends of Emmerich's Personal-Social Bipolar Scale

Sensitive to Others	vs	Self-Centered
4.6% Center 23.0% Control		58.5% Center 4.5% Control
Submissive	vs	Dominant
3.1% Center 12.6% Control		13.8% Center 8.0% Control
Active	vs	Passive
44.6% Center 28.7% Control		3.1% Center 20.6% Control
Apathetic	vs	Energetic
3.1% Center 18.4% Control		43.1% Center 21.8% Control
Stable	vs	Unstable
56.9% Center 21.8% Control		1.5% Center 0.0% Control
Solitary	vs	Social
7.7% Center 32.2% Control		27.7% Center 14.9% Control
Assertive, Bold	vs	Timid, Fearful
20.0% Center 12.6% Control		0.0% Center 6.8% Control
Dependent	vs	Independent
1.5% Center 8.0% Control		69.2% Center 37.9% Control
Constructive	vs	Destructive
53.8% Center 32.2% Control		0.0% Center 1.1% Control
Aimless	vs	Purposeful
1.5% Center 18.4% Control		41.5% Center 22.9% Control
Academically Motivated	vs	Otherwise Motivated
0.0% Center 2.3% Control		67.7% Center 57.5% Control

TABLE 6 (cont.)

Percentage of Center and Control Children on the Extreme Ends of Emmerich's Personal-Social Bipolar Scale

Aggressive	vs	Affectionate to Others
1.5% Center		18.5% Center
4.6% Control		8.0% Control
Socially Secure	vs	Socially Insecure
47.7% Center		1.5% Center
23.0% Control		8.0% Control
Rigid	vs	Flexible
0.0% Center		32.3% Center
4.6% Control		16.0% Control
Happy	vs	Unhappy
38.5% Center		1.5% Center
25.3% Control		2.3% Control

It seems that program children score much more positively on these items than control children. They are more involved, expressive, relaxed, active, energetic, stable, social, assertive, independent, constructive, purposeful, affectionate to others, socially secure, flexible and happy. They are also more self-centered.

Section 4 - A Description of the Nutrition and Health Intervention Programs

Two parts of the Family Development Research Program have received little attention in earlier reports; they are the nutrition and health intervention programs. The nutrition program will be the first discussed, followed by a discussion of the health program.

Although the nutrition component of the Children's Center program is an integral part of the total experience and not an isolated event which occurs at "lunch time," the many positive comments which we have had from visitors and observers regarding our mealtimes has prompted us to analyze some of the factors which have contributed to these observations. Feeding practices and procedures vary between the infant group and the family-style group, but the basic philosophy and goals remain constant. A nutritionist acts as a consultant and resource person for the teachers in both groups. Her role is to interpret the general goals and style of child contact as they relate to the nutrition component. This is accomplished chiefly by in-service training sessions with the teachers, by conferences with teachers regarding individual children, and by observations in the classrooms where positive practices and techniques have been recognized and encouraged.

Lunch time for the family-style group is one of the few regularly scheduled activities of the day where all the children participate. The lunch period was observed recently by a staff member over a period of several days. The following is a description of those observations.

Children came to the lunch room in an exuberant but orderly fashion. They sat themselves at tables as indicated by their teachers. There were four to six children at each table, with one or two teachers per group. The children served themselves most of the food while the teachers were there to assist with the pouring of soup or milk.

There was much interaction between the children and the teachers in each group. During one observation, a child asked what vegetables were in the soup. The other children and the teacher all helped identify several different kinds that were in that particular variety of vegetable soup and then proceeded to talk about their color and shape.

Small servings of individual foods were used, and children were encouraged to help themselves to additional servings. Children were also free to determine the order in which they wished to consume their food as evidenced by the child who had several small servings of pineapple cubes before he tasted his soup. Skill in the use of the spoon was apparent as the children ate their soup, but the absence of inhibiting table manners were also witnessed as they picked up the handleless soup cups and drank the last drops of soup. The teachers were very effective in modeling table manners rather than verbally emphasizing them, and the children responded by the use of utensils, napkins, etc.

Over a period of several days a variety of different types of menus gave children experiences with many different kinds of foods. Lunches varied from soup and sandwiches, to meat and vegetables, to mixed dishes and salads. Although individual children had their likes and dislikes, in general the children responded well to the variations in menus.

The children were involved in the preparation of one of the vegetables for a lunch, i.e., scrubbing potatoes for the baked potatoes. This heightened their interest in the individual meal and also afforded them an opportunity to learn more about the particular vegetable.

Mealtime was an orderly, relatively quiet scene of cheerful, hungry children eating without unnecessary restraints, learning self-control of appetite as well as behavior. The situation maximized the opportunity for sharing, for socialization, and for teaching good nutritional practices.

Since it is our conviction that the positive aspects of this group feeding situation depend in no small part on the attitudes and skills developed by the teachers in the infant program, we have asked them to describe this aspect of their program. The following statement on infant feeding practices, as described by the infant teachers, is considered by the writer to be one of the best conceived nutrition education programs for infants ever described in this country.

At six months when the children start in the center program, we feed them strained foods such as liver, fruit, vegetables, and vegetable and meat mixtures. Even though we were told that sometimes the mothers fed their children table foods at home at this age, (reports from home visitors), we felt that at the center strained foods were more appropriate. We always kept each food separate as an individual experience. The only exception to this was with liver when sometimes the taste would be masked with fruit or vegetables until the child acquired a taste for the liver by itself. When feeding, we would rotate the items and not feed all of one food at a time, i.e., we would give the children a taste of vegetable--describe it, label it, and say "mmmm, mmmm good." Then we would give something different and go through the same procedure with it. We would also do a lot of singing at this time using the names of the children or the foods or both. We tried to make the children laugh, relax, and in general have a good time while they ate. If they didn't want to taste something at first, we would try to humor them into a taste and usually succeeded because it was a fun type of playing effort rather than a forceful attempt. Many times we would give desserts first. There was no set pattern, and we never made sweets or desserts something special, merely presented them as part of the meal. Many times while the children were eating, we would munch right along with them and show them that we were really enjoying it. We couldn't be more sincere with the children about wanting to eat and enjoying it than by actually eating and drinking at the same time as they were eating. We took as long as was necessary to get the feeding done; we never rushed them.

We waited until about ten months to introduce table foods, although we had slowly introduced junior foods before--one at a time. We started with crackers and cheese strips at snack time. We have never had anyone refuse to try them. We would always say "mmmm, mmmm" and with motions tried the snack ourselves. Even though the children were not talking themselves yet, we always said, "If you don't want it, you don't have to eat it." We also gave them ready-to-eat cereals and other forms of finger food so they could practice feeding themselves. We never picked up the snack foods and fed it to them if they didn't want to feed themselves. Sometimes in the beginning, however, if a child didn't seem to know what to do with his snack, we would guide his hand to the food and then to his mouth so he would know what to do.

When we introduced table foods we also introduced the cup and the spoon at the same time. We just put a spoon for them on their plates and filled a cup with a little milk and set it beside the plates. This stage wasn't easy because the first thing a child would want to do when he saw the cup was to take it and pour it out and play in it. We would hold the children's hands on their cups and guide the cups to their mouths so they could see what was expected. It takes a lot of time to learn how to drink from a cup and the children still spill milk and turn their plates over. We don't raise our voices, however, but just say, "Let's eat some of it." During this learning period, we both (teacher and child) had a spoon. We fed the children and they tried to imitate us. Once they mastered the technique, we let them feed themselves.

Even when they had mastered the spoon, they would still frequently use a spoon in one hand, while they were using their other hand in the food to feed themselves. We gently reminded them to use the spoon, but didn't mention the hands, i.e., we didn't say, "Take your hand out of the dish." We still allowed them to eat as much or as little as they wanted and to take whatever amount of time was necessary. We never forced a child. We just said, "Eat your food." When their behavior indicated they were full, we didn't remind them again. When someone refused to taste, we just gently asked them once again to try it, and tried it ourselves, expressing how good it was.

Even when asking children to taste something, we always labeled the food--for example, "Don't you want to try your spinach?" or "You liked your potatoes, but you are not eating your peas." We always used this time for communication and learning. (Note: The teachers' indication that they never said "you don't like" is particularly interesting when related to the fact that these children have developed very few general dislikes later in the program).

Our policy was not to force a child to eat, but sometimes we had to use our own judgement and perhaps be a little more forceful than we would like. We had goals in feeding but no rigid rules. For example, if a child over a year came in and we knew they had not had breakfast and wouldn't feed themselves, we would sit down on that occasion and feed them. Also, when we knew the home nutrition was poor we would go to extra effort to get a child to eat, but still made it as pleasurable an experience as possible. (These children from homes with poor nutrition were identified by the home visitor and individual procedures were planned with the nutritionist for their feeding).

We had no age levels for achievement, but kept trying again and again until a task or a taste was acquired. You have to have an open mind and remember that eating and the acquiring of tastes for food is a learned experience. If a child couldn't learn that two plus two were four the first time he tried it, you wouldn't give up thinking he would ever learn it, you would keep trying. The same is true with food. If a child didn't like something the first time it was presented, we presented it again a few days later and at intervals until he began to eat it.

When we fed the children we lined them up. Even though it looked like a factory assembly line, it helped get everyone involved in the same process at the same time. Each child, however, got individual attention and the other children seemed to enjoy the attention given to each of the others. <u>It also gave them a group feeling</u>. <u>Even though they were in individual chairs, it prepared them for eventual group eating at regular tables</u>. We always fed them at the same time and they anticipated it and looked forward to it and were happy during feeding times.

It must be said again that visitor after visitor comments on meal time as being scenes of joy, order, socialization, and learning that they did not expect to find being acted out by children under three. We have thought a great deal about the center's nutrition program and hope this brief description will be of help to those planning programs for infants and toddlers.

Our effect on the diet of program children did not begin with all of our children when they started attending the center at six months of age. Half of the program children had their families visited once a week during the first six months of life of the child. One of the jobs of the home visitors for this group was to provide nutritional guidance to the mothers in the feeding of their young infants. By comparing the nutrient intakes of both groups of infants at six months we can gauge the effectiveness of this early nutritional guidance. Table 7 shows the summary of these comparisons. The National Research Council's recommended dietary allowances were used as a guide in evaluating nutrient intake.

For both groups the average intake of protein, calcium, vitamin A, thiamine, and riboflavin met or exceeded the recommended amounts. The average intake of calories was low for both groups, but the infants in the prenatal program had a slightly higher average intake than those entering the program at six months. The ascorbic acid average intake was the same for both groups and was only slightly below the recommended level. At six months the average iron intake was low, but it was higher for the six-month entry group than for the prenatal group.

Since the average intake does not give any indication of the numbers of subjects not receiving recommended amounts of a nutrient, frequency distributions were also determined on the values for each of the nutrients and are included in the second part of Table 7. In examining these results, the effectiveness of nutrition counseling becomes more apparent. In the prenatal group all of the subjects received recommended amounts of protein and riboflavin, whereas, several subjects in the group just entering the program received less than 100 per cent of the recommended dietary allowances for these nutrients. In the case of calories, calcium, vitamin A and thiamine, slightly greater percentages in the prenatal group were reported to have received 100 per cent of the recommended amounts of these nutrients. Although fewer subjects in the prenatal group received 100 per cent of the RDA for iron, there were also, however, fewer subjects in the prenatal group who received less than 25 per cent of the recommended amount. A similar situation occurred with ascorbic acid.

The adequacy of the infant's diet in terms of iron depends to a large extent on the feeding of infant dry cereals. Although the home visitors have encouraged the initial use of infant cereals, they were also appreciative of the mother's desire to introduce family foods to the infant and supported her in this practice by helping her make appropriate choices of family foods. The lack of adequate enrichment of bread and cereal products in general is reflected in inadequate iron consumption for many age and sex groups.

Similarly in the infant diet orange juice makes a significant contribution to vitamin C, and nutritional adequacy of this nutrient in the diet depends heavily on the use of this or some other citrus fruit. Orange juice is expensive, and frequently less costly substitutes are used and as a result the intake of ascorbic acid is below recommended amounts.

TABLE 7

Summary of the Comparison at Six Months of Nutrient Intakes of Infants in the Prenatal Group with the Six-Month Entry Group

Nutrient	RDA	Average Intake		% Below 100%		% Below 75%		% Below 50%		% Below 25%	
		Prenatal	6-Mon. Entry	Prenatal	6 Mon. Entry	Prenatal	6-Mon Entry	Prenatal	6-Mon. Entry	Prenatal	6 Mon. Entry
Calories	770-900 KCal	727 KCal	679 KCal	67	74	28	43	7	7	--	--
Protein	14-16 Gms	33 Gms	31 Gms.	--	7	--	2	--	--	--	--
Calcium	500-600 mgs.	911 mgs.	800 mgs.	4	16	--	5	--	2	--	--
Iron	10-15 mgs.	7 mgs.	9 mgs.	70	64	63	57	42	40	21	38
Vitamin A	1500 I.U.	4662 I.U.	4469 I.U.	22	26	4	9	4	--	--	--
Thiamine	0.4-0.5 mgs.	0.5 mgs.	0.5 mgs.	36	38	22	21	4	9	--	--
Riboflavin	0.5-0.6 mgs.	1.5 mgs.	1.6 mgs.	--	5	--	--	--	--	--	--
Ascorbic Acid	35 mgs.	32 mgs.	32 mgs.	72	66	61	54	43	40	4	21

These last two nutrients deserve special attention because they require in the infant's diet certain foods in addition to milk. It is also required that these additional foods be carefully selected in order to provide the necessary amounts of iron and ascorbic acid. These are the nutrients most frequently found to be below recommended amounts and hence would reflect food practices difficult to modify. Increased focus on the sources and importance of these nutrients would be beneficial for any nutrition program geared to working with the economically disadvantaged.

The diet of the child is not our only concern. Of particular importance to us is the diet of program women during their pregnancy. We have found that there is reason for concern because diets seem to get worse during pregnancy rather than better. Some of the reasons for and ramifications of these decreased diets are discussed below.

The nutrition emphasis in medical care during pregnancy frequently focuses primarily on diet restriction rather than on improving the overall quality of the woman's diet. This practice which we found to be the case in our prenatal study should be seriously questioned especially when the pregnant woman is a young teenager from an economically disadvantaged background. Since the benefits during pregnancy of diet restrictions whether in terms of calories or sodium are not without question even when applied to well-nourished adult women, their disadvantages when practiced for less well-nourished teen-age girls may far out-weigh any benefits. (Committee on Maternal Nutrition, 1970.) When food was restricted, as it was for 65 per cent of the women in this study, their choice of diet did not usually follow the desired pattern of the special diet. This seemed to be due both to the fact that the patient did not understand the rationale of the diet modification and that little attempt was made on the part of the medical personnel in the clinics to understand the patient's food practices and to make reasonable modifications based on them.

In a recent study reported by Yuan (1972) of healthy, middle-class, adult pregnant women followed by a private Syracuse obstetrician, preconception diets which met or exceeded recommended dietary allowances for most nutrients decreased during pregnancy as a result of caloric restriction to control weight. On the average these women consumed diets before pregnancy which were sufficiently high in essential nutrients that the decrease in food intake observed during pregnancy was not of concern except for the decrease in the amount of iron. In the Yuan study this latter problem was met by recommending supplements which the women reported consuming regularly.

A preliminary survey of the diets of 21 women in our prenatal group revealed that few were initially consuming the recommended types or amounts of food from the basic four food groups. It is anticipated that the nutrient analysis of the prenatal diets of our program women, which is in progress now, will show a decrease in nutrient intake similar to the Yuan study. Based on the evidence that these women were consuming less adequate diets initially, were younger (many adolescents) and did not report as regular consumption of supplements, these findings have serious implications for those concerned with the health care of adolescents particularly during pregnancy.

Since most of the subjects entered this study during the last trimester of pregnancy when the impact of diet restriction is greatest and the physical discomforts of pregnancy manifest themselves, little success in dietary improvements might be predicted. Actually from a preliminary analysis of data in terms of food groups some improvement seems to have been effected in the diets of those women whose initial food intake was poor, whereas a decrease in nutrient intake appears to be the general rule as pregnancy proceeds. Our study strongly indicates the need for early, carefully planned, individualized, relevant nutrition counseling by individuals sensitive to the psycho-social as well as the physical needs of young pregnant women.

A second program, one dealing with health services for our families, started in July of 1972. It was made possible by a collaborative effort between the Pediatric Department of the Upstate Medical Center of New York State, and our Family Development Research Program at Syracuse University. Experience and training in Child Development were provided to a senior pediatric resident by the Family Development Research Program and in turn the resident provided the program with free services for its families. A continued association of this nature is planned for future years so that free health care can be continued for program families.

Since July 1972 the Children's Center has had available the services of a senior pediatric resident from the Department of Pediatrics at the Upstate Medical Center. The following objectives were defined as the health intervention program for the 72-73 fiscal year:

1. Evaluation of the past and present health states of the children.

2. Updating medical care where necessary.

3. Availability to the children while attending school for medical or surgical problems as they might arise.

4. Availability to the parents to discuss the medical and medical-social needs of the children.

5. Evaluation of all children for iron deficiency anemia.

6. Vision, hearing and dental evaluation of all children 3 years of age or older.

Objectives #1 and #2 were attended to by a thorough review of the health records of all the children receiving medical care from either the pediatric clinic at the Upstate Medical Center or from the Syracuse Neighborhood Health Center. This comprised 80% of our children. Those children who were in need of immunizations, blood determinations, further evaluation of old problems, etc. were identified. Child Development Trainees then contacted the families of these children and arranged for a visit to the appropriate medical facility. Several reminders were needed for some families but there eventually was nearly 100% compliance.

The pediatrician arranged to be in attendance at the "Center" at specified times during the week to answer questions posed by teachers and home visitors. Also a biweekly telephone hour was established to allow the pediatrician to answer the questions of parents regarding medical and medical-social problems. Finally, since the pediatrician's office is located only a short distance from the Center, it was relatively easy to see children at the Center whenever medical problems arose.

Since lead poisoning is a major problem in all large cities, it was deemed necessary to investigate for lead poisoning in our Center children. Many of the families live in extremely high-risk housing for lead poisoning. Because lead screening involves a blood sample, it was decided to additionally study our children for iron deficiency anemia. Arrangements were made with the Upstate Medical Center to run these tests free of charge. The Chairman of the Department of Pediatrics has also arranged to provide therapy, if necessary, at no cost to our parents.

Finally, the Syracuse Neighborhood Health Center will soon begin visual, auditory and dental screening of all our children three years of age or older.

To date then, we have updated the health status of almost all our children. Our children are adequately immunized according to the schedule recommended by the American Academy of Pediatrics. Those children with special health needs, such as asthma, eczema, heart murmurs, etc., are under more rigorous supervision. Presently, we are in the midst of the lead and anemia detection programs so we have no data on this to present as of yet. We are happy to report, in addition, that aside from sporadic cases of impetigo and the usual amount of upper respiratory infections, there have been no serious out-breaks of communicable disease, and there have been no serious injuries to children while attending school.

Section 5 - A Profile of Teacher Classroom Functioning

During the past two years the Assessing the Behaviors of Caregivers scales (ABC-I & ABC-II) were created by the Family Development Research Program staff under the direction of our program supervisor, Alice Honig. These scales were created at the request of the hundreds of day care directors and evaluators who needed a brief, easy to use instrument to evaluate the quality of caregiving for infants and preschoolers. We have found ABC to be not only brief and easy to use, but also highly sensitive in differentiating adult inputs (Honig & Lally, 1973).

The data presented in this section shows the specific types of inputs that children are actually receiving from teachers. Table 8 contains the data on our two teachers of infants from 6 to 15 months of age. Table 9 contains data on master and staff teachers of children from 18 to 36 months of age.

These two tables deserve careful study. They seem to show that the theoretical and pragmatic program requirements in Piagetian, Eriksonian, language and child care terms can be quite successfully carried out when teaching staff is well trained.

The behavior profile of experienced infant teachers affirms the changes in program emphases carried out by adults sensitive to young children's increasing readiness for more challenging social, cognitive, and motoric experiences and choices. Thus although language inputs of all kinds are frequently delivered to younger babies, older infants in a program which stresses language developmental (as well as Eriksonian and Piagetian) principles are literally offered a rich smorgasbord of verbal communications. It was found that such inputs did not decrease as the teachers' working day went on with its attendant drain on energy. This finding is a tribute to the effectiveness of the teachers observed. Teacher language input stayed at high levels throughout the days of the week. This again reflects the fact that neither 'Friday-fatigue' nor 'slow-to-start Monday' factors affected the teachers' verbal interactions with children.

The differentiated environments of the open-education model in which the older infants participate might have been expected to affect the level or quality of teacher inputs, since children choose freely the activity areas in which they wish to play and learn. The Sensory Experience and lunch areas were found to be associated with more teacher language, compared to the other areas. This seems highly reasonable since reading to children is an important activity in the one area and close contact at a single lunch table characterizes the other area. Yet in none of the areas, even where child motoric behaviors were predominant, did teachers fail to input a good deal of language to the children. Thus teachers highly trained in the appropriate uses of language in a variety of settings can offer a wealth of both emotionally and cognitively facilitating language experiences, regardless of the nature of the activity areas where children prefer to enter and participate.

Considering the importance given by Erikson (1963) to the development of trust, of autonomy, and of initiative in very young children, the findings with regard to provision of praise and of positive social-emotional behaviors in general were very gratifying. The data indicate that teacher's sensitivity to a young child's increasing needs for independence did not preclude her offering positive and happy responses to older toddlers. The lack of punitive or harsh behaviors by teachers who were helping young children learn behavioral limits or rules was also entirely consistent with developmental goals for managing child behavior.

The learning of Piagetian sensori-motor and preoperational concepts was encouraged through a goodly amount of teacher arrangement of materials and provision of opportunities for special games. Data (Honig & Lally, 1973) show that the large amounts of inservice training which teachers had experienced was quite successful in helping teachers of infants become familiar with and proficient at such specialized skills.

Conclusion

Both forms of a brief, easy-to-learn checklist of behaviorally-defined items of teacher input were found to be effective in monitoring our program for infants. The kinds and frequencies of behaviors exhibited by experienced teachers of infants have been shown to reflect exceedingly well the social-emotional and cognitive goals of a developmental day care program for both younger and older infants.

It is hoped that the Assessing the Behaviors of Caregivers checklist will prove useful in monitoring the quality of care offered in infant programs. In addition, it is hoped that the data reported here for experienced teachers will help to focus in-service training efforts in such a way as to help inexperienced teachers change their behaviors toward increasing congruence with the behaviors of experienced teachers.

TABLE 8

ABC I

Percentage of Caregiver Behaviors Recorded for Two Teachers of Infants During 552 Two-Minute Observations (Age of Infants - 6-15 Months)

Items	% Tallied
I. Language Facilitation	
1. Elicits vocalization (through initiation and contingent responses)	42.5
2. Converses: chats to infant	79.2
3. Praises or encourages child	36.1
4. Offers help or solicitous remarks	30.6
5. Inquires of child; requests	19.2
6. Gives explanation, information, or culture rules	28.4
7. Labels sensory experiences	4.0
8. Reads to or shows pictures	3.3
9. Sings to or plays music for	6.0
II. Social-Emotional Positive Inputs	
1. Smiles at child	56.5
2. Uses loving or reassuring tones	55.8
3. Provides physical loving contact	17.0
4. Plays social games with child	6.0
5. Uses eye contact to arouse, orient, or sustain infant's attention	50.2
III. Social-Emotional Negative Inputs	
*1. Critices verbally; scolds;	0.0
*2. Forbids; negative mands	9.1
*3. Acts angry; is physically impatient; frowns; restrains child physically	0.1
Total of 1, 2, & 3	
4. Punishes physically	0.9
5. Isolates child (as behavior modification technique for unacceptable behaviors	0.0
6. Ignores child when child shows need for attention	0.1
IV. Presentation of Piagetian Tasks and Opportunities for Sensorimotor Development	
1. Object Permanence	29.3
2. Means and Ends	27.0
3. Imitation	34.4
4. Causality	37.1
5. Prehension	30.3
6. Space	11.6
*7. New schemas	8.3
V. Caregiving Routines: with child	
1. Feeds	22.3
2. Diapers; Toilets	7.8
3. Dresses; Undresses	4.3
4. Washes; Cleans	10.7
*5. Prepares child for sleep	5.2
*6. Physical shepherding	7.5
*7. Eye-checks on child's well-being	78.3
VI. Caregiving Routines: with environment	
1. Prepares food	6.3
2. Tidies room or environment	28.1
*3. Helps other caregivers	~~0.0~~ 5.3
VII. Physical Development	
1. Provides kinesthetic stimulation	38.8
2. Provides large-muscle play	14.5
VIII. Does nothing	0.0

*All starred items have been added to the ABC (Assessing Behaviors of Caregivers) checklist subsequent to this study or were initially combined, as indicated, with other items. Percent tallied was based on 120 two-minute observations for these items.

TABLE 9

Percentage of Caregiver Behaviors with Infants 18-36 Months of Age Recorded for Two "Master" Teachers During 708 Two-Minute Observations and Six Staff Teachers During 1608 Two-Minute Observations

ABC II

Items	Two Master Teachers % Tallied	Six Staff Teachers % Tallied
I. Facilitates Language Development		
1. Converses	64.7	56.4
2. Models language	78.2	64.9
3. Expands language	52.0	37.7
4. Praises, encourages	48.9	45.2
5. Offers help, solicitous remarks, or makes verbal promises	24.4	24.9
6. Inquires of child or makes request	73.7	74.2
7. Gives information	66.8	56.9
8. Gives culture rules	39.7	31.4
9. Labels sensory experiences	29.9	20.6
10. Reads or identifies pictures	15.8	10.4
11. Sings or plays music with child	11.0	6.5
12. Role-plays with child	15.3	7.5
II. Facilitates Development of Skills		
Social Personal		
1. Promotes child-child play (e.g., with puzzles, blocks, etc.)	11.6	6.1
2. Gets social games going (e.g., London bridges)	7.1	7.0
3. Promotes self-help and social responsibility	24.7	22.9
4. Helps child recognize his own needs	16.4	11.6
5. Helps child delay gratification	20.3	15.0
6. Promotes persistence, attention span	6.8	6.4
Motoric Inputs		
7. Small muscle, perceptual motor	14.7	14.7
8. Large muscle, kinesthesis	15.4	19.0
III. Facilitates Concept Development		
1. Arranges learning of space and time	34.2	25.9
2. " " " seriation, categorization, & polar concepts	47.6	38.7
3. Arranges learning of number	20.2	13.2
4. " " " physical causality	23.4	17.3
IV. Social-Emotional: Positive Inputs		
1. Smiles at child	41.4	37.4
2. Uses raised, loving or reassuring tones	18.5	11.3
3. Provides physical loving contact	13.0	9.9
4. Uses eye contact to draw child's attention	11.9	6.0

TABLE 9

ABC II (Cont.)

Percentage of Caregiver Behaviors with Infants 18-36 Months of Age Recorded for Two "Master" Teachers During 708 Two-Minute Observations and Six Staff Teachers During 1608 Two-Minute Observations

Items	Two Master Teachers % Tallied	Six Staff Teachers % Tallied
V. Social-Emotional: Negative Inputs		
1. Criticizes verbally, scolds, threatens	.3	5.8
2. Forbids, negative mands	42.5	61.8
3. Frowns, restrains physically	53.8	37.3
4. Isolates child physically--behav. mod.	16.5	8.5
5. Ignores child when child shows need for attention	0.0	1.2
6. Punishes physically	0.0	0.0
7. Gives attention to negative behavior which should be ignored	1.6	1.3
VI. Caregiving Routines with Child		
1. Diapers, toilets, dresses, washes, cleans	13.7	19.4
2. Gives physical help, helps to sleep, shepherds	23.0	21.3
3. Eye-checks on child's well-being	41.7	31.8
4. Carries child	5.9	4.5
VII. Care-giving: Environment		
1. Prepares/serves food	10.6	12.1
2. Tidies up room	20.1	21.6
3. Helps other caregiver	9.2	7.9
4. Prepares activities, arramges environment to stimulate child	14.8	12.7
IX. Does Nothing	0	0

Section 6. An Assessment of Children by Their Parents and the Perceptiveness of Parents as to How the Program and Program Staff Has Affected Them and Their Children

A potent evaluation of program effectiveness comes from those people being served. Too often the perceptions of the recipients of services are not considered important. When one runs a program that bases a great deal of its thrust on the support of family strengths it would be foolhardy not to consider and then act on the feelings of family members. This last section of the progress report contains information gathered from interview sessions with parents of program children who are 36 months of age. Table 10 contains data dealing with the way parents of center and control children view the functioning of their children.

One gratifying finding is that both groups of parents see their children in a more positive light than they see the children of others. When we asked center and control parents to compare their children with their child's peers, we found the following. Both groups of parents see their children as more sharing, less shy, less a fighter, less bossy, more inquisitive and more sensitive to the feelings of others. They felt that their children tried more new and different tasks, stood up for themselves more and made more of their own choices. Center parents differed from control parents on pouting. Center parents thought that their children pouted as much as their peers; controls felt that their children pouted less. Center parents saw their children as much less shy when compared to peers than did controls. In school-related areas (asking questions, trying new and different tasks, and making his own choices) center parents rated their children much higher than did controls. It could be generally said that both groups of parents saw their children in a positive light when compared with peers, but center parents saw their children in a more positive light than did control parents.

When children were compared with siblings many of the similarities changed. When a parent was asked to rate among his children, the task was more difficult. We feel that participation in the program has affected the view of parents toward target children in relation to their siblings.

When compared to siblings, control families find the target child less sharing, more of a fighter, more bossy, less inclined to try new and different tasks than brothers and sisters. Center parents perceived just the reverse on these items. A major difference was the perception of the center parents that the target child had a greater need to be the center of attention than his siblings. Control parents did not see this. Trends on educational items remained the same as for peers with the exception of "teaching other children." Controls felt that the target child taught others more than his brothers and sisters did, but less often than his peers. Center parents felt that the target child taught others much more than his brothers and sisters did, and also more than his peers did. It seems that target children from center homes were ranked more positively when compared with siblings than were the target children from the control group.

Center parents were also asked many questions about their perceptions of the program. Summaries of the parent's evaluation of the effect of the day care program

Table 10

A Comparison of Center and Control Children with their Peers and Siblings on Twelve Personal-Social Variables

	Compared to Peers				Compared to Siblings			
	center		control		center		control	
	more	less	more	less	more	less	more	less
1. Sharing	72.7%	27.2%	68.7%	31.2%	80%	20%	40%	60%
2. Shy	3%	96.9%	37.5%	62.5%	20%	93.3%	20%	80%
3. A fighter	18.1%	81.8%	25.0%	75.0%	33.3%	66.6%	60%	40%
4. Bossy	45.4%	54.5%	31.2%	68.7%	50%	50%	60%	40%
5. Needs to be center of attention	50%	50%	50%	50%	60%	40%	20%	80%
6. Teaching other children	80%	20%	40%	60%	90.9%	9.0%	75%	25%
7. Asking questions	81.8%	18.1%	62.5%	37.5%	73.3%	26.6%	60%	40%
8. Pouting	50%	50%	25%	75%	60%	40%	20%	80%
9. Sensitive to others feelings	72.7%	27.2%	75%	25%	66.7%	33.3%	60%	40%
10. Trying new and different ideas	90.9%	9.0%	75%	25%	60%	40%	40%	60%
11. Standing up for himself	72.7%	27.2%	75%	25%	73.3%	26.6%	80%	20%
12. Making his own choices	90.9%	9.0%	75%	25%	80%	20%	80%	20%

upon their children cited 91 behaviors which were felt would not have occurred if the child had not participated in the program. Of these behaviors 48 reflected a greater interest in educational activities, 18 reflected more responsibility assumed in home activities, and seven reflected more positive social emotional behaviors. Only seven responses reflected any negative behavior noted by parents as possibly the result of center attendance.

In evaluating child behaviors considered to be due to the home visit program, parents described even more strongly the educational activities. Out of 43 behaviors noted by parents, 38 reflected an increased interest in educational activities on the part of the child.

The parents see themselves as stricter and more severe disciplinarians than the center teachers. Despite this difference, the parents approve the center's positive reward methods of discipline with children.

When the parents were asked what they might have done differently if there had not been a weekly home visit program, 16 freely admitted they would have given far less educational input to their children.

When evaluating the day care center staff, the mothers generally described them as friendly, informative, considerate, helpful, and always giving a welcome feeling to parents. Due to other day-time activities on their part, however, such as school, working, and caring for other children in their families, parents reported that they were unable to visit the center as often as they would have liked. Each mother, however, has been to visit the center at least once. Many mothers come on Fridays to the weekly mothers' workshops.

The families were almost unanimous in describing the help factors which make the Child Development Trainers (Home Visitors) effective in their job. Although the word "friend" itself is not used in all cases, statements about the CDT such as "can talk to her about anything," "she is always available when I need her," "visits with me also and not just the child," "understanding," "never puts me down" and "doesn't make me feel like just another visit in the work day," make the point. The CDT's are seen as people who genuinely care about the entire family and what happens to family members. They are seen as truly involved with each family. In more than one instance they have been described as "my best friend." The CDT's maintain flexible hours and an open phone for their mothers and this consideration for their parents' needs is reflected in the parents' evaluation of the CDT as effective, helpful, and necessary adjuncts to the family's life.

When this program first began, an interview with the CDT's concerning their personal view of their role and necessary qualifications for effectiveness was recorded in the Progress Report (1970). A summary of these interviews follows.

> "In general, the CDT's feel they are successful, that their success is due to their persistence, consideration, concern, respect for their mothers, and the relaxed atmosphere they bring to the home. They feel that these mothers cannot be pushed, that the CDT cannot go in and be too forceful, but must wait for the mothers to be ready. The CDT's believe that they must give the impression of authority and knowledge, but that it must be done benevolently and they must show themselves as helpers not meddlers. This they do by being themselves and by their firm belief in what they are doing."

> "The CDT's feel that they do their job better than anyone. Some expressed the opinion that many trained professionals have wrapped themselves so intensely in the statistical and theoretical problems of the poor and the deprived that they have forgotten how to react from the heart. The CDT's believe that the concern they feel for each family is the key factor in getting families interested in the program and that this concern is not expressed by talk but by spending time with people when it is needed. This was aptly expressed by one CDT who said, "people with a college education go in there and make one critical mistake...they try to tell the people that they are working for what is good for them. These families don't need someone to tell them what they need. They need someone to help them cope." (Progress Report, 1970, p. 5)

What becomes clear after reading the parents' comments about the CDT is that the CDT's achieved their goals. Trust and friendship, essential for the CDT's effectiveness, were built solidly into the home visiting relationship. Through the CDT's effectiveness, the program's goals for reaching children through parental involvement were quite definitely achieved.

Parental reports show clearly the educational achievements of the mothers and how the child care facility was used to help parents attain some of their goals. Table 11 shows that between 20 to 25% of maternal grandparents in the low-income and experimental families typically attained a high school diploma.

Table 11

Percentage of High School Diplomas or Higher Education Attained by Families

	Experimental	Low-Income Control
Mothers	40	25
Maternal Grandmother	22	25
Maternal Grandfather	20	16

After two-and-one-half years of the program, 40% of the experimental mothers and only 20% of control mothers have attained a high school diploma. This difference in educational achievement between program mothers and low-income control mothers is significant at $p = .02$.

Job training received by both low-income groups was primarily in the secretarial field. In addition, 23% of the experimental mothers received specialized training in the nursing field.

We have gleaned then from the parent interviews that the parents see: (1) the program as having a positive effect on their children, (2) the center staff as supportive, understanding, and providing a relevant service, (3) the home visitors as skillful friends they can rely on, and (4) their own lives as having been changed as a result of the center's being available. These indices of program progress are most important measures for the program staff, for we feel that parental involvement and interest are the essential ingredients needed for the program's longitudinal success.

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Summary of Progress Report

The six areas of information contained in the 1973 Progress Report are summarized below. The discussion of the first longitudinal data comparing center and control children reveals that center children, at 36 months, score significantly higher on the Stanford-Binet Intelligence test than do their matches from a low-education control group, but not as high as controls from a high-education contrast group. An analysis of the Illinois Test of Psycholinguistic Abilities indicates few differences among the three groups.

The effect of noncognitive mediators of behavior on the cognitive development of program children, as measured by the Schaefer Classroom Behavior Inventory, the Beller Autonomous Achievement Striving Scales, and the Schaefer Behavior Check List, shows the following. On the Schaefer Classroom Behavior Inventory the center children, at 36 months, have greater than median responses on all the items reflecting social and emotional developmental maturity, and have responses below the median on social and emotional items reflecting developmental immaturity. The results of the Beller Scale indicate that the center children have developed very superior attention and persistence habits, satisfaction and interest in work, and the ability to carry out tasks autonomously and with initiative. The Schaefer Classroom Checklist is found to be a powerful predictor of 36-month IQ.

A description of the personal-social behavior of program children includes an analysis of Self-Esteem and of Emmerich's Observer Ratings of Children. A consideration of the mean scores for individual items on the self-esteem rating scale shows that the center children at 36 month rate high on all thirteen items, and that the group mean for the entire scale is relatively high. Results from the Emmerich are such that program children appear to be more involved, expressive, relaxed, active, energetic, stable, social, assertive, independent, constructive, purposeful, affectionate to others, socially secure, flexible and happy than control children.

Another area described is that of the nutrition and health intervention programs. This section is concerned with both the prenatal maternal diets and the postnatal infant diets. For both groups the average intake of protein, calcium, vitamin A, thiamine, and riboflavin met or exceeded the recommended amounts. The average intake of calories was low for both groups, but the infants in the prenatal program had a slightly higher average intake than those entering the program at six months. Also at six months the average iron intake was low, but it was higher for the six-month entry group than for the prenatal group. These results indicate the importance of nutrition counseling for pregnant mothers.

The health intervention program has begun, and the health status of almost all of the center children has been updated. The children are adequately immunized according to the schedule recommended by the American Academy of Pediatrics. Those children with special health needs are under more rigorous supervision. It is also interesting to report that there have been no serious outbreaks of communicable disease and there have been no serious injuries to children while attending school.

Both forms of the Profile of Teacher Classroom Functioning are found to be effective in monitoring the program for the center infants. The kinds and frequencies of behaviors exhibited by experienced teachers of infants have been shown to reflect exceedingly well the social-emotional and cognitive goals of a developmental day care program for both younger and older infants.

An assessment of children by their parents and the perceptions of parents as to how the program and program staff have affected them and their children reveals that the parents view the program in a positive manner and have found it to have a positive effect.